



## DID YOU KNOW ...

The human population of the world is expected to be nearly tripled by the year 2100, inevitably causing more gridlock, sprawl, traffic, noise and loss of open space, to threaten our quality of life.

The U.S. was the first country to declare a national policy to let some places remain wild and free, preserving 104 million acres that lie in 44 states. New Jersey has two wilderness areas - 3,660 acres of Great Swamp Refuge, near Morristown, and 6,681 acres in the Edwin B. Forsythe National Wildlife Refuge.

The passing of the Wilderness Act in 1964, insured that areas given wilderness status would be protected forever.

Duck stamp sales since 1934 exceed \$700 million and 5.2 million acres of wetland habitat for the National Wildlife Refuge System have been preserved.

As Theodore Roosevelt once said: "The nation behaves well if it treats the natural resources as assets that it must turn over to the next generation increased, and not impaired in value."



*Wild Things*

AMERICA'S  
NATIONAL  
WILDLIFE  
REFUGES ... *where wildlife  
comes naturally!*

## THE NATURE OF VOLUNTEERING

Explore the Wonders of Nature - Volunteer

Refuge Announces new  
Volunteer Master Naturalist Certificate Program (VMN)

Edwin B. Forsythe National Wildlife Refuge and The Richard Stockton College of New Jersey are partners in two environmental education programs that will be offered yearly. Both programs are recognized nationally.

Instructors from Stockton, the Refuge and local environmental organizations will offer 40 hours of workshops and field experiences, including trips to Sedge Island and the Pinelands. Most programs will be at the Refuge. To receive certificates as VMN's, participants will complete eight hours of advanced training and offer 40 hours of approved volunteer work at the Refuge or other environmental organizations. Interested folks can learn more about volunteer naturalists programs in other states by visiting [www.nalliance.org](http://www.nalliance.org).

A second program developed by the National Association for Interpretation will be offered, and includes 32 hours of training and practice in interpretation. As defined by NAI at its website ([www.interpnet.com](http://www.interpnet.com)), "Interpretation is a mission-based communication process that forges emotional and intellectual connections between the interests of the audience and the meanings inherent in the resource." The 32 hours of training includes opportunities to develop and practice presentations about resources at the Refuge and other environmental organizations. Graduates of this program will be credentialed by NAI as "Certified Interpretive Guides."

Interested folks may take either program separately, or both programs together. Check it out at [www.stockton.edu/hshs](http://www.stockton.edu/hshs) and click on 'Certificate Programs.'



photo by David Carr, 2007



## INSIDE THIS ISSUE ...

Did you Know .....	1
Volunteer Master Naturalist Certificate Program .....	1
Chief's Corner .....	2
View From the Tower - Integrity of a Salt Marsh .....	3
A Word from Our Friends .....	4
Stay Focused Photo Club .....	4
Upcoming Events .....	6
Who's on Staff .....	6



## CHIEF'S CORNER

National Wildlife Refuge  
System Chief  
Geoffrey L. Haskett

In 2007, the bald eagle soared off the federal endangered species list. It was a year of other soaring accomplishments, as well. The President signed the omnibus spending bill that increased Refuge System funding about \$39 million above fiscal year 2007 levels to \$434.1 million for fiscal year 2008.

The Refuge System welcomed more than 37 million people in 2007. Those visitors made a measurable economic impact. Recreational use of wildlife refuges generated more than \$1.7 billion in economic return. That's extraordinary for a federal agency whose mission is to conserve wildlife habitat and the creatures that depend on it.

### Land Acquisition

Although land acquisition funding was limited, we expanded the Refuge System by about 102,000 acres. We established Rocky Flats National Wildlife Refuge, just 16 miles northwest of Denver, on what had been a former defense site. Eventually, the refuge will have walking trails, some hunting and a visitor contact station to give people in Denver a place of solitude and personal rejuvenation just a step from the hubbub of a major city.

### Our Built Assets

The Refuge System has more than 47,000 "built" assets - from office space and visitor centers to wildlife observation towers and production facilities for fish hatcheries. All together, they are valued at more than \$21 billion. Unfortunately, our maintenance backlog increased from \$1.5 billion to \$2.5 billion.

### Comprehensive Conservation Plans

In other areas of long-standing concern, our progress has been steady and significant. We have completed Comprehensive Conservation Plans for 259 national wildlife refuges, outlining our long-term vision for what they will look like and how they will serve both wildlife and the American taxpayer. Another 168 CCPs are in the draft or comment stage. We will complete the remaining 127 CCPs by 2012, meeting the congressional deadline.

In many cases, real changes are taking place. Nisqually

National Wildlife Refuge in Washington is ready to begin construction next summer to restore a 700-acre estuary that is a nursery and feeding ground for endangered Chinook salmon. All five area watershed groups have contributed some of their state salmon recovery funding to finance the project, which was proposed in the refuge's CCP.

### Fighting Invasives

One of the greatest threats to national wildlife refuges is invasive nonnative species. We've made some headway in fighting the problem. For example, 61 refuges received grants to engage volunteers in the mapping, treating and restoration of refuge lands. Preliminary statistics from 46 refuges show that more than 1,000 volunteers have already put in more than 10,200 hours. The fight will be a long one, but it's one we have to win.

### Birding Initiative

A group of 14 renowned professionals joined together as the Birding Team, a driving force behind the Birding Initiative that will help birding enthusiasts better appreciate the importance of national wildlife refuges. The dedication and enthusiasm of the Birding Team is impressive. "The Big Sit" was the Initiative's first success, when about two dozen refuges gathered people of all ages into circles to count birds and see firsthand that national wildlife refuges are some of the best places to see wildlife. In 2008, we hope to complete a cooperative agreement with Cornell Laboratory of Ornithology.

## IT'S YOUR TURN!

What are you most passionate about in your volunteer work at Forsythe? What are your concerns? Are you working on a project or tackling a challenge that you would like to share with others?

We'd love to hear from you! Send us the details and we will put your article in an upcoming issue of this newsletter.

Send your story to [sandy\\_perchetti@fws.gov](mailto:sandy_perchetti@fws.gov).

## "Integrity...of a Salt Marsh" New 2008 Research Project

Coastal salt marshes are unique wetland communities that are comprised of flora and fauna that have adapted and evolved to the extreme conditions of hydrology, soils, and salinity found within these areas. Numerous wetland dependent wildlife species are often found to concentrate within salt marsh communities during certain periods of their annual cycle, such as during migration or winter. Other wildlife species are highly dependent on salt marsh habitat to complete their reproductive cycles. To protect these unique communities, a high preponderance of National Wildlife Refuges have been established along coastal areas comprised of large tracts of salt marsh.

Unfortunately, there are few coastal salt marshes that remain in pristine condition.

The majority of salt marshes have experienced some form of anthropogenic alteration such as; oil spills, chemical mosquito control, drainage for mosquito control, salt hay farming, introduction of invasive species, restricted tidal flow, road construction, channelization, etc. These alterations impact both the intrinsic value of salt marshes as well as the quality of salt marsh habitat for the unique wildlife which are dependent upon these areas.

Additionally, as sea-level rise inundates some salt marshes, migration/creation of new salt marshes will be severely hampered by human development of adjoining lands.

Management of the National Wildlife Refuge System is guided by The National Wildlife Refuge Improvement Act, (Public Law 105-57), approved October 9, 1997, (111 Stat. 1253) which gives guidance to the Secretary of the Interior for the overall management of the System. A major component of the Act includes; a requirement that the Secretary of the Interior maintain the biological integrity, diversity and environmental health of the Refuge System. To meet this legal mandate, and to identify important salt marsh restoration actions to benefit wildlife, the National Wildlife Refuge System (NWRS) requires the development of a monitoring program to measure the ecological integrity of salt marshes, along with the response of priority obligate salt marsh dependent wildlife to various metrics which constitute the integrity index. Biologists will measure the ecological integrity of salt marshes at numerous refuges across a broad geographic area at appropriate time intervals.

Results of integrity measurements will be used to rank the ecological integrity of salt marsh units along an integrity continuum, as well as providing a long-term standardized monitoring method of measuring the health of salt marshes over time. Salt marsh units receiving low scores will be prioritized to receive appropriate restoration actions to improve

their integrity ranking. Within the prioritization scheme will be identified practices which will both improve the intrinsic ecological integrity of the salt marsh management unit and restoration actions that will have the greatest benefit to salt marsh obligate wildlife. As salt marsh restoration projects are completed, we will continue to monitor and evaluate the effectiveness of restoration practices at improving salt marsh integrity and refuge wildlife objectives.

### Salt Marsh Management Units:

Biologists will identify discrete salt marsh management units which may be bounded by large water bodies, adjoining uplands, roads, rivers, or other obvious boundaries. It is estimated that greater than 100 discrete salt marsh units will be identified across numerous refuges and landscapes. Salt marsh units may vary in size from less than a hundred acres to several thousand acres. Generally, each unit will have received consistent management treatments across the breadth of the unit.



### Identifying Integrity Metrics

Research protocol requires individual metrics within the ecological integrity index that will capture both the abiotic and biotic components of salt marshes as well as the natural processes and environmental health parameters which influence salt marshes. Anticipated metrics may include; vegetation community, wildlife community, tidal restrictions, invasive species, mosquito control activities, degree of physical alteration (ditching, pond creation, etc), adjoining habitat, degree of human activity, and other metrics as deemed appropriate.

### NWRS Use of the Ecological Integrity Index

Biologists will use salt marsh ecological integrity index results to rank all salt marsh units, refuges, and large landscapes along an integrity continuum. This information will be used to identify those salt marsh units which retain high integrity and may be used as a restoration model for other units with lesser integrity. Salt marsh units which retain high ecological integrity will be provided special protection efforts against various threats which may impact their ecological integrity.



## A WORD FROM OUR FRIENDS

The Friends of Forsythe NWR is a non-profit group established in 1998 to provide support and services to the Edwin B. Forsythe National Wildlife Refuge in Oceanville, New Jersey. Our goals are:



- Promoting a better understanding of the natural history and environment of Southern New Jersey, the Edwin B. Forsythe NWR and the National Wildlife Refuge System.
- Helping to preserve and enhance the wildlife habitat at this Refuge, and to assist the Refuge, the Refuge System and the U.S. Fish and Wildlife Service in a variety of educational and supportive efforts.

Please consider joining the Friends of Forsythe and help us accomplish these goals. Call 609-748-1535 or visit [www.friendsofforsythe.org](http://www.friendsofforsythe.org)

### A new look for the Friends

Last summer, we announced a contest to come up with a new logo for our organization. The criteria -- the logo's art and text should clearly express, in a simple, eye-catching manner, our mission of support for the refuge and its wildlife.

We received many great entries, each one just as great as the next; however one entry blew us away. It was a drawing by a local high school student. And here we are -- our winner!

Congratulations to Amanda Ferry of Galloway. Amanda is a junior at Absegami High School and Vice-President of Smithville's Venture Crew #77.

She chose the slogan *Taking Action through Education* because "everyone who comes into the refuge, whether to volunteer their services or simply take in the sights, will always leave having learned something new. Mostly they discover that places like these are important to them and are worth saving."

Our appreciation also goes out to our volunteer, Toni Minneo, also of Galloway. Toni shared her artistic talents to make this logo "camera ready." Toni also designed a beautiful framed certificate that was awarded to Amanda by our Deputy Project Leader, Brian Braudis.



Since our last issue, the photo club has been busy with its final activities of 2007, and the planning of programs for the new year. The Third Annual *Refuge Shootout* was held on November 10th. This special photo competition is one in which all subjects had to be photographed on a National Wildlife Refuge. This year all of the winning photos were taken here at Forsythe. There were three competitive categories: color prints, color slides, and black and white prints. In the color print category, Rita Rechsteiner captured 3rd place honors with "Peaceful Shadows" as well as 2nd place honors for "On the Lookout." John Oesterling's "Blue Heron" took first place honors and tied for "Best in Show." John dominated the color slide category by taking 2nd place for "Mother Goose" and 1st place for "Just Resting" which was one of two of his pictures involved in the 3 way tie for "Best in Show." In the black and white print category it was a sweep by residents of the nearby Four Seasons at Smithville community: Dennis Loughlin's "Morning at Forsythe" took 3rd place, while Sally Neff's "Full Moon over Snow Geese" took 2nd place, and Don Chillum's "Circle of Light" not only took 1st place in this category, but emerged victorious after a runoff from a 3 way tie for "Best in Show." Continuing an annual tradition, the club had the winning photo matted and framed and presented to the Forsythe Refuge as a token of its appreciation for the use of the refuge auditorium for our meetings and for the assistance rendered by the refuge staff for all of its activities.

December's meeting was our annual *Pot Luck Holiday Luncheon*. If you didn't know you were at the Refuge, you might have thought you were dining at Careme's or the restaurant at the Culinary Institute in Hyde Park. A sumptuous lunch was followed by a Chinese auction with winners walking away with photography books, cameras and lenses, frames and batteries, and even a computer desk! Winners of the "September Challenge" were announced and we were treated to a slideshow of all entries. Photographers were assigned several items to photograph from clocks to fences to abstract themes such



SFPC continued from page 4



"Circle of Light" by Don Chillemi

as "decay." Judging was performed by Denny Coleman, owner of Motofoto of Northfield, who was one of the club's founders as well as its first president. Don Chillemi was again the victor as he won "Best in Show" in this contest as well.

January ushered in the new year with leadership. Tom Cray finished serving a two year term as president and outgoing vice president, Dennis Loughlin took over the helm. John Chintall replaced Dennis as vice president and Pat Callaco took over as Secretary for Mariann Maene who will continue to be our website manager. Sally Rowland stays on as Treasurer. Dennis welcomed the members and guests in attendance by pointing out the club was really "a diverse group of people brought together by a passion for photography, a commitment to protect our wildlife, and an appreciation for the beauty of the people, places, and things that we capture through our lenses. Some pretty wonderful people can be found among those who choose to spend their leisure time photographing the small wonders of our world and sharing the results with friends." This year the club looks forward to increasing its participation in refuge activities such as Hooked on Fishing, Earth Day at the Refuge, Make a Difference Day, the groundbreaking for the new visitor center. Sandy Perchetti spoke to the club about the Digital Nature Photography for Children program and hoped that the club would be able to sponsor such an event at Forsythe. Tom Graf, our program director spoke of the wide variety of speakers he has lined up for our monthly meetings. As of this issue we have already benefited from John Chintall's presentation "Managing Your Workflow" as well as a wonderful presentation on "Nature Photography in the Pine Barrens" by Ann-Marie Woods. Dennis Loughlin has begun organizing for upcoming field trips to New York Historical Society, Philadelphia Museum of Art, the Baltimore Museum of Art and the Patuxent and Eastern Neck National Wildlife Refuges.

- Dennis Loughlin

Tower continued from page 3

Salt marsh units which are low in ecological integrity will be ranked according to their restoration and potential contribution to NWRs salt marsh ecosystem objectives. Individual metrics for each unit will be analyzed to determine those factors which are most impacting the integrity score of a unit.

A salt marsh integrity index will also be used by refuges to evaluate salt marsh objectives within Comprehensive Conservation Plans (CCP) and Habitat Management Plans (HMP) that must be completed by each individual refuge. Through analysis of integrity scores from all refuge management units, we will identify threshold integrity scores which individual refuges will use as an objective to maintain the intrinsic value of salt marshes. Identifying a threshold salt marsh integrity index will provide refuges a measurable objective to achieve within their salt marsh management activities.

Additional analysis of overall integrity scores will be performed to identify impacts on priority obligate salt marsh wildlife communities. As an example, it may be hypothesized that salt marshes with low integrity will contain greater numbers of invasive species, habitat heterogeneity and altered trophic structures. This altered structure may result in opportunistic wildlife species invading a salt marsh that are not truly obligate salt marsh species. The impact of this may be to increase wildlife diversity within a salt marsh unit, when in fact the most suitable contribution of the salt marsh may be to have low wildlife diversity.

### Implementation of a Salt Marsh Ecological Integrity Index at E. B. Forsythe NWR

Refuge staff and USGS scientists will work together to identify appropriate ecological integrity index metrics that measure both the intrinsic value of salt marshes as well as impacts on the unique wildlife communities that depend on these habitats. Upon evaluation and completion of various metrics, Forsythe Refuge will perform initial measurements within various salt marsh units for which they are responsible. The initial analysis of metric results will be used to identify ecological integrity thresholds, priority salt marsh units, and individual restoration needs to improve integrity of salt marsh units.

Upon prioritization of salt marsh restoration needs to improve integrity scores, we will implement appropriate restoration actions. Subsequent ecological integrity monitoring at appropriate time intervals will be used to evaluate effectiveness and/or modify restoration actions.

We are in the process of selecting biological technicians and interns for the Salt Marsh Index study. This hands-on opportunity enhances their academic education and exposes them to the day-to-day workings of a field biologist.

Completion of all this work at Forsythe would not be possible without the dedication and commitment of the many volunteers who contribute their time and talents.

## UPCOMING EVENTS

For information on any of these events, call 609-652-1665

### Evening at Forsythe

First Wednesday of each month 7:00 pm Refuge Auditorium

April 6 Frog Walk led by Vinny Turner

May 7 Pete Dunne, New Jersey Audubon

### Special Events

April 19 Earth Day, National Environmental Education week and National & Global Youth Service day

April 21 and 25 TV-Turn Off Week - bring a picnic dinner and your family to Forsythe for a very special evening.

May 10 Annual children Hooked On Fishing, Not On Drugs derby

October 12-18 National Wildlife Refuge Week

October 25 Make a Difference Day

### Saturday Morning Walks

will begin in April - check our website for dates & times.

<http://www.fws.gov/northeast/forsythe>

## WHO'S ON STAFF?

Project Leader

**Steve Atzert**

Deputy Project Leader

**Brian Braudis**

Chief of Visitor Services

**Art Webster**

Wildlife Biologists

**Vinny Turner**

**Kevin Holcomb**

Refuge Law Enforcement Officer

**Chris Pancila**

Administrative Officer

**Martha Hand**

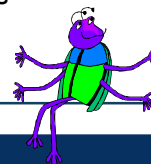
Volunteer Coordinator

**Sandy Perchetti**

Maintenance Professionals

**Tom Holdsworth**

**Roger Dutch**



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## THE NATURE OF VOLUNTEERING